

PRODUCT DATA SHEET

www.internationalgasdetectors.com

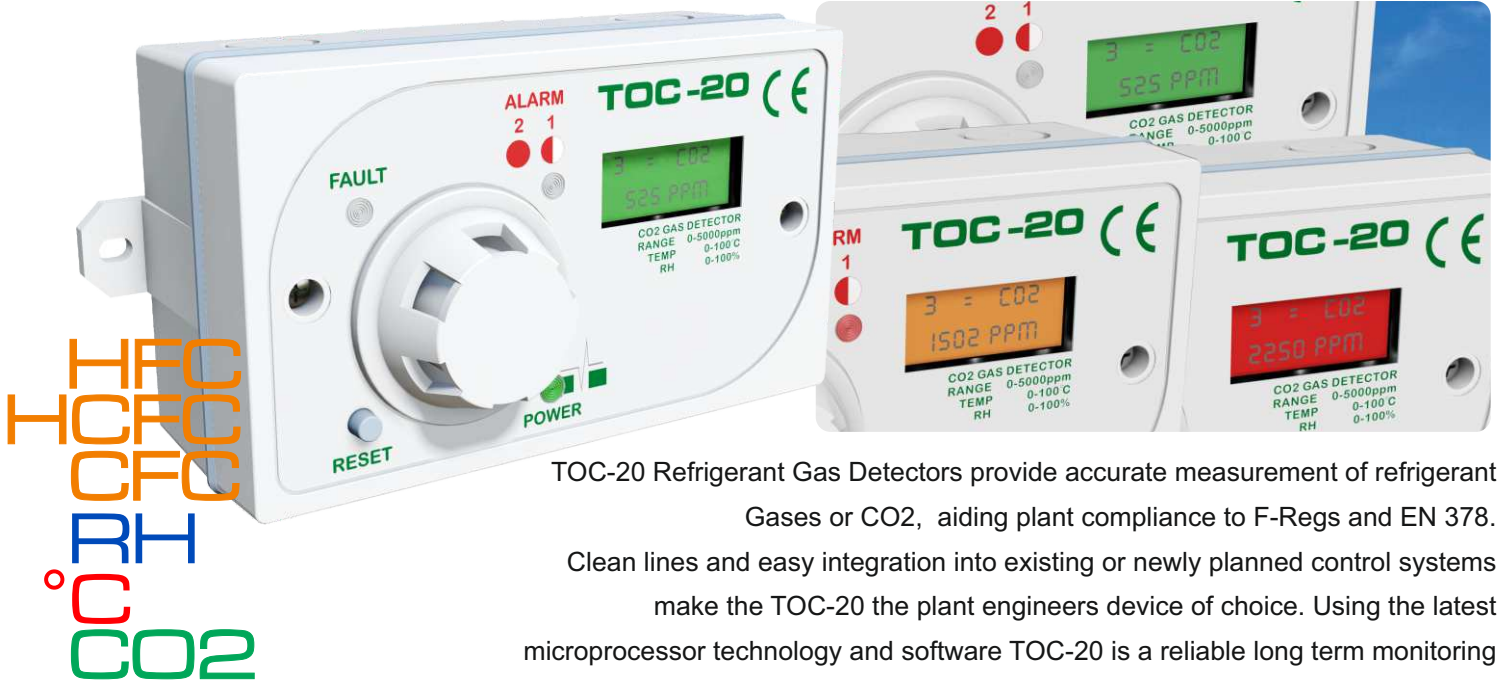
OLIVER IGD

Control Systems

Transmitters

Sensors

Accessories



TOC-20 Refrigerant Gas Detectors provide accurate measurement of refrigerant Gases or CO₂, aiding plant compliance to F-Regs and EN 378. Clean lines and easy integration into existing or newly planned control systems make the TOC-20 the plant engineers device of choice. Using the latest microprocessor technology and software TOC-20 is a reliable long term monitoring solution. TOC-20 is supplied pre-calibrated ready to use.

Standard Specifications

Power 18-28V DC (230V AC Adaptor Supplied)
Construction ABS
Outputs 3 off 4-20mA or 0-10V Linear Outputs for Refrigerant, Temperature and Humidity
 Modbus RTU Interface
 2 off SPCO Relays Rated 4A Non Inductive
 85dB Alarm Sounder

Operating Environment

Temperature -5 to 55 Deg C
Humidity 5-95% RH Non-Condensing
Sealing IP64 (Excluding Sensor)

Measuring Ranges Refrigerants Typically 0-1000ppm,
 Resolution 10ppm, Accuracy +/-5% of Range
 Temperature -5 to +55 °C, Resolution 1°C, Accuracy +/-4 °C
 Humidity 0-100% RH, Resolution 1%RH, Accuracy +/-4%RH

Package Size 180mm X 100mm X 75mm (See Dimension Drawing)

Weight 375g

Features

Multi-Colour RGB LCD Display Backlight
 Industry Standard 4-20mA/0-10V Outputs
 Two Alarm Relay Outputs
 Modbus Interface
 User Configurable Alarms
 Wall Mount
 Supplied Pre-calibrated
 In-Service Calibration Possible
 Sensors are Dust & Splash Resistant
 Case Sealed to IP64
 Humidity and Temperature Compensated

TOC-20 is commonly deployed into:

Refrigeration Plant Rooms
 Cold Storage Depots
 Supermarket Cold Storage
 Air Conditioning



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 Fax: +44 (0) 161 484 2345
 Email: sales@internationalgasdetectors.com
 Website: www.internationalgasdetectors.com



FS646773
 REF: T20R-V2

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EC Declaration of Conformity

Issuers name and address:

Oliver IGD Limited of
Triton House
Crosby St,
Stockport,
United Kingdom



Declares that the product listed as:

TOC-20

4-20mA or Addressable Output Gas Detector with display
Temp & RH

Are in conformity with the provisions of the following European Directive(s) when installed, operated, serviced and maintained in accordance with the installation and operating instructions contained in the product documentation.

2004/108/EC EMC Directive
2006/95/EC Low Voltage Equipment Directive (note not applicable to 24V DC Powered Versions)

And that the standards and/or technical specifications referenced below have been applied or considered.

EN 61779-1:2000	Electrical apparatus for the detection and measurement of flammable gases, general requirements and test methods.
EN 50271:2010	Electrical apparatus for the detection and measurement of combustible gases, toxic gases or Oxygen: requirements and tests for apparatus using software and or digital technologies. <i>Excluding requirements for SIL</i>
EN 61000-6-2: 2005	EMC Generic standards. Immunity for industrial environments
EN 61000-6-4: 2007	EMC Generic standards. Emission standard for industrial environments
EN 61000-3-2/A2:2009	EMC Limits. Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)
EN 61000-3-3: 2008	EMC Limits. Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase

Technical File Reference T20-TF9

Product Markings

CE TOC-20

SI-serial number

Oliver IGD Limited Operate and Independently assessed ATEX/IECEX QAN.

Oliver IGD Limited operate an independently assessed ISO9001:2008 Quality Management System.

Testing Agency:

Quality Assurance Certificate Number
ExVeritas 16PQAN0014

Quality Assurance Notification Number:
2585

Quality Management Certificate Number
FS 646773

TUV - SUD
Octagon House
Concorde Way
PO 15 5RL
Fareham



Mehr Sicherheit.
Mehr Wert.

ExVeritas,
Units 16-18,
Abenbury Way,
Wrexham Industrial Estate,
Wrexham, UK, LL13 9UZ

BSI Assurance UK LTD,
Chiswick High Road,
London
W4 4AL
UK

TUV Certificates and reports can be checked on-line at https://www.tuev-sued.de/industry_and_consumer_products/certificates

Issued on: June 2016

At Oliver IGD Limited, Stockport, SK2 6TS, United Kingdom

Signature:

Declaration of Conformity in accordance with EN ISO/IEC 17050-1:2010

Name

Andrew J Collier M.I.O.D

Position: Managing Director

Date: June 2016

Declaration Ref: TOC-20DEC-3



International Gas Detectors

CH₄ H₂S CO₂
NO₂ SO₂ NO₂ CO



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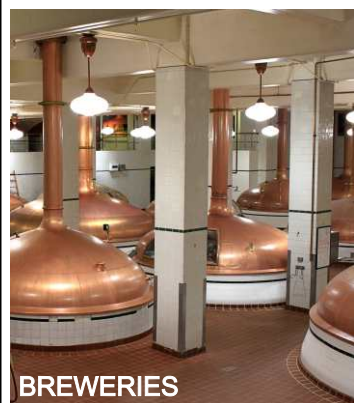
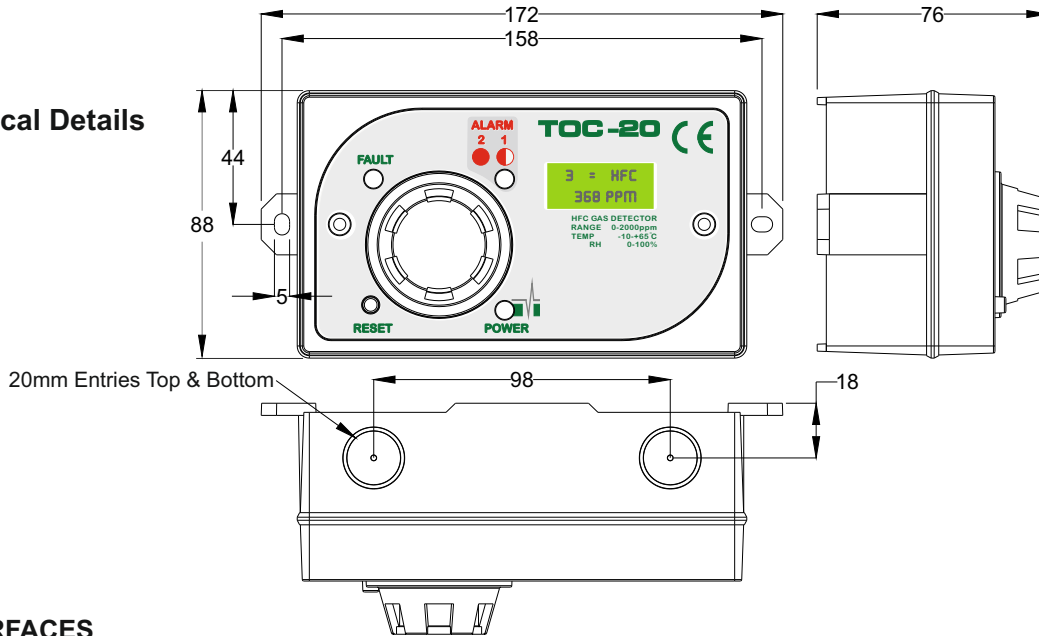
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Physical Details



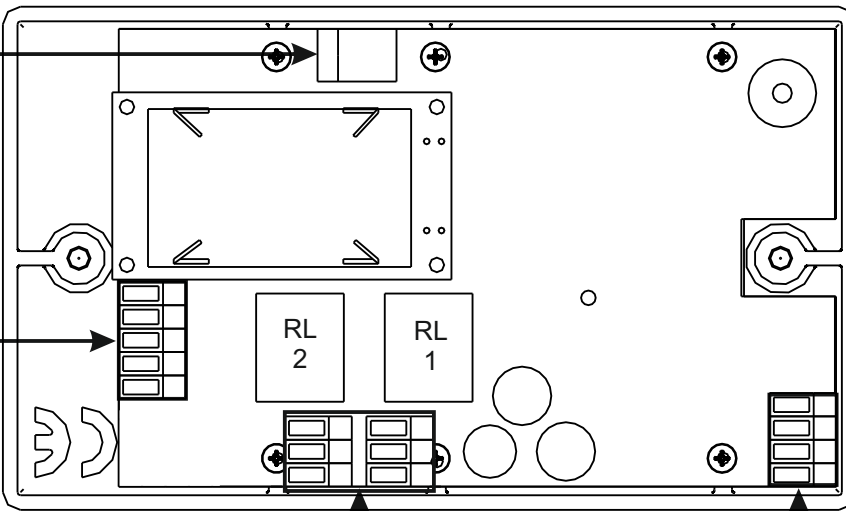
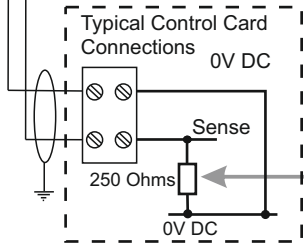
INTERFACES

Jack Plug Power Connection Using Supplied Adaptor (24V DC)

Analogue Output Interfaces

- +24V DC
- 24V DC
- mA Sig 1
- mA Sig 2
- mA Sig 3

Note as standard mA outputs are set. These can be re-configured as 0-10V signals

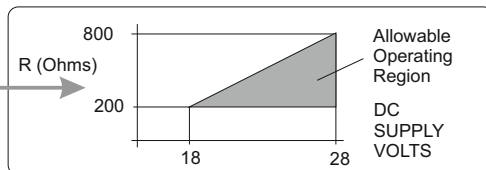


Normally Closed
Common
Normally Open

Connections common to each of the two relay outputs

RS485 Modbus Comms Port

- 0V DC
- A
- B
- 24V DC



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Notes

To comply with the requirements of EN378 and the F GAS regulation sensors must be tested annually.

Local regulations may specify the nature and frequency of this test. If not contact Sensors for details

After exposure to a substantial gas leak, sensor should be checked and replaced if necessary.



Summary of Refrigerants and Suitable Gas Detector Models

Refrigerant	Group/Name	Heavier or Lighter Than Air	Gas Detector Model
R 717	Ammonia NH3	Lighter	TOC-30-NH3 or TOC-30A-NH3
R 744	Carbon Dioxide CO2	Heavier	T20-CO2-5000
R 290	Propane C3H8	Heavier	TOC-31A-PHC
R 600	Propane C3H8	Heavier	TOC-31A-PHC
R 22	HCFC	Heavier	T20-HCFC-2000
R 401A	HCFC	Heavier	T20-HCFC-2000
R 401B	HCFC	Heavier	T20-HCFC-2000
R 408A	HCFC	Heavier	T20-HCFC-2000
R 409A	HCFC	Heavier	T20-HCFC-2000
R 134A	HFC	=	T20-HFC-2000
R 404A	HFC	Heavier	T20-HFC-2000
R 416A	HFC	Heavier	T20-HFC-2000
R 507	HFC	Heavier	T20-HFC-2000
R 410A	HFC	Heavier	T20-HFC-2000
R 411A	HFC	Heavier	T20-HFC-2000

HFC
HCFC
CFC
RH
CO2

ATEX Version Gas Detectors, Gas Sampling Units, System Controllers and Bespoke Solutions Are Available From Our Parent Company International Gas Detectors.

Visit our Website at www.internationalgasdetectors.com or call for advice.



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NH₃ SO₂ NO₂ CO



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